

**IN THE CLAIMS:**

On page 11, in line 1, cancel "CLAIMS" and substitute:

**--WE CLAIM AS OUR INVENTION:--** therefor.

Claim 1 has been amended as follows:

- 5           1.       (Currently amended)       An apparatus for circulatory isolation and treatment of a part of a patient's body, said apparatus comprising:
- ~~[[ - ]]~~ a fluid circulation loop having a first end and a second end;
- ~~—obstructing means capable of~~ a flow obstructer adapted for
- 10           obstructing a blood flow in a patient's blood vessel such that a body part, extremity or organ becomes circulatorily isolated from the circulation of the rest of the body, ~~wherein said obstruction means having~~ flow obstructer including a compressing means arrangement, applicable around said extremity devised to compress a section of said extremity and thereby circulatorily
- 15           isolate the patient's extremity and prevent a leakage of a fluid, ~~that can be blood or a therapeutic liquid,~~ from said extremity to the rest of the ~~patients~~ patient's circulation; and catheters, having a reinforced section, ~~devised~~ adapted for being introduced in an artery and in a vein having connection to said
- 20           extremity;
- ~~[[ - ]]~~ a flow-through means arrangement comprising a first flow-through member and a second flow-through member connectable to said first and second ~~end~~ ends of said fluid circulation loop, respectively, for providing said part of the patient's body with a
- 25           fluid connection to the fluid circulation loop, making it possible to circulate a therapeutic fluid through said body part.

Claim 2 has been amended as follows:

2.       (Currently amended)       The apparatus as ~~recited~~ claimed in claim 1, wherein ~~[[ - ]]~~ said compressing ~~means~~ arrangement is tourniquet-shaped and ~~having~~ has a predetermined height; and ~~[[ - ]]~~ said catheters being~~[[ : ]]~~ an arterial catheter having an elongated section that is reinforced to
- 30

withstand an outside pressure and where said section have a length that is greater than the height of the compressing ~~means~~ arrangement; and a venous catheter ~~likewise~~ having an elongated section that is reinforced to withstand an outside pressure ~~and where~~, said section ~~have~~ having a length that is greater than the height of the compressing ~~means~~ arrangement.

Claim 3 has been amended as follows:

3. (Currently amended) The apparatus as ~~recited~~ claimed in claim 1, where said ~~obstructing means~~ flow obstruc~~ter~~ comprises balloon catheters, said catheters being capable of obstructing the blood flow in a patient's blood vessels leading to and from an isolated part or organ of the body, such that said part or organ becomes circulatory isolated from the rest of the body.

Claim 4 has been amended as follows:

4. (Currently amended) The apparatus as ~~recited~~ claimed in claim 1, wherein said apparatus further comprises~~[[ - ]]~~ pump ~~means~~ devised for circulating a fluid in said fluid circulating loop and said catheters.

Claim 5 has been amended as follows:

5. (Currently amended) The apparatus as ~~recited~~ claimed in claim 4, wherein said therapeutic fluid has a composition that ~~makes~~ allows said fluid ~~possible~~ to oxygenate and ~~that~~ wherein said apparatus also comprises an oxygenator unit capable of oxygenating blood and said therapeutic fluid for ~~the purpose of~~ supplying said extremity with oxygen during a prolonged period of time.

Claim 6 has been amended as follows:

6. (Currently amended) The apparatus as ~~recited~~ claimed in claim 5, wherein said apparatus further comprises a heat providing unit connected in the fluid circulation loop, ~~with the purpose of~~ for warming the fluid.

Claim 7 has been amended as follows:

7. (Currently amended) The apparatus as ~~recited~~ claimed in claim 6, wherein said apparatus comprises a control unit with an input unit for a number of input signal lines and a output unit for a number of control lines  
5 devised for controlling a number of process parameters including fluid pressure and temperature, oxygen saturation, and the flow speed of said fluid.

Claim 8 has been amended as follows:

8. (Currently amended) The apparatus as ~~recited~~ claimed in claim 7, wherein said circulatory unit comprises a venous reservoir with an  
10 inlet for receiving fluid coming from the patient, and an outlet connected to the pump means for recycling the fluid to the patient.

Claim 9 has been amended as follows:

9. (Currently amended) The apparatus as ~~recited~~ claimed in claim 8, further comprising a level sensor ~~capable of~~ for measuring the height  
15 of fluid in the venous reservoir.

Claim 10 has been amended as follows:

10. (Currently amended) The apparatus as ~~recited~~ claimed in claim 9, wherein said control unit comprises a display devised for displaying trend curves and the level of fluid in the venous reservoir and time of  
20 treatment.

Claim 11 has been amended as follows:

11. (Currently amended) The apparatus as ~~recited~~ claimed in claim 1 wherein said fluid circulation loop includes a tube set which comprises a shunt connection between an arterial and a venous part of the tube set, said  
25 shunt connection having a valve ~~means~~ enabling the closing and opening of said shunt connection.

Claim 12 has been amended as follows:

12. (Currently amended) A method for the treatment of thrombosis in a ~~patients~~ patient's extremity comprising the following steps of:  
30 [[-]]connecting the internal blood circulatory system of said extremity to an extracorporeal circulation;

[[~~-~~]]isolating the extremity from the rest of the patient's circulation while maintaining an extracorporeal circulation in said extremity; and [[~~-~~]]adding a thrombolytic agent.

Claim 13 has been amended as follows:

5           13.     (Currently amended)       A method for the treatment of cancer in a patient's organ comprising the following steps:  
              [[~~-~~]]connecting the internal blood circulatory system of said organ to an extracorporeal circulation;  
              [[~~-~~]]isolating the organ from the rest of the patient's circulation while  
10           maintaining an extracorporeal circulation of a fluid in said organ;  
              [[~~-~~]]adding a chemotherapeutic agent to the fluid; and  
              [[~~-~~]]circulating said fluid with the agent through the organ for achieving a therapeutic effect.

Claim 14 has been amended as follows:

15           14.     (Currently amended)       The method as ~~recited~~ claimed in claim 12 ~~or 13~~, further comprising ~~the following step~~:  
              [~~-catheterising~~] catheterizing the patient using Seldinger technique

Claim 15 has been amended as follows:

20           15.     (Currently amended)       The method as ~~recited~~ claimed in claim 14 ~~where~~ comprising using said Seldinger technique ~~is used~~ for positioning reinforced catheters in blood vessels passing through tissue compressed from the outside of the patients body.

Claim 16 has been amended as follows:

25           16.     (Currently amended)       The method as ~~recited~~ claimed in claim 15, further comprising ~~the following step~~: [[~~-~~]] adding a therapeutic fluid to a fluid in said ~~extracorporeal~~ extracorporeal circulation, said fluid being blood or a therapeutic fluid or a mixture thereof.

Claim 17 has been amended as follows:

30           17.     (Currently amended)       The method as ~~recited~~ claimed in claim 16, further comprising ~~the following step~~: [[~~-~~]] oxygenating the fluid.

Claim 18 has been amended as follows:

18. (Currently amended) The method as ~~recited~~ claimed in claim 17, further comprising ~~the following step: [[-]]~~ warming the fluid.

Claim 19 has been amended as follows:

5 19. (Currently amended) The method as ~~recited~~ claimed in claim 18, where said thrombolytic agent is ~~so~~ effective or present in such high concentration that it could cause ~~haemorrhage~~ hemorrhage or other side effect injuries if said liquid entered the blood circulation of the brain or other sensitive organ.

10 Claim 20 has been amended as follows:

20. (Currently amended) An apparatus for treatment of a patient's extremity, said apparatus comprising:

[[~~-~~]]a tourniquet-shaped compressing ~~means~~ arrangement having a predetermined height;

15 [[~~-~~]]an arterial catheter having an elongated section that is reinforced to withstand an outside pressure ~~and where<sub>1</sub>~~, said section have having a length that is greater than the height of the compressing ~~means~~ arrangement;

20 [[~~-~~]]an venous catheter ~~likewise~~ having an elongated section that is reinforced to withstand an outside pressure ~~and where<sub>1</sub>~~, said section ~~have~~ of said venous catheter having a length that is greater than the height of the compressing means.

Claim 21 has been amended as follows:

25 21. (Currently amended) A fluid circulation loop, ~~comprising~~ having a tube connectable to a ~~patients~~ patient's blood vessel system and useable for altering certain properties of a fluid circulating in said patient, having a first end and a second end connectable to a patient, and a shunt connection.

Claim 22 has been amended as follows:

30 22. (Currently amended) The fluid circulation loop as ~~recited~~ claimed in claim 21, wherein said shunt connection is connected between a

part of the loop which is close to the first end and a part of the loop which is close to the second end of the loop, and in that said shunt connection comprises a valve means that enables the closing and opening of said shunt connection.

5            Claim 23 has been amended as follows:

23.    (Currently amended)        The fluid circulation loop as recited  
10       claimed in claim 22, comprising an arterial valve means connected in the loop  
further closer to the first end than the shunt connection, and a venous valve  
means connected in the loop further closer to the second end than the shunt  
connection enabling the opening and closing of fluid connection to the  
patients patient's body.

          Claim 24 has been amended as follows:

24.    (Currently amended)        The fluid circulation loop as recited  
15       claimed in claim 23, comprising means a fluid removal arrangement for  
removal of fluid from the loop by a Y-connector and associated valves.

          Claim 25 has been amended as follows:

25.    (Currently amended)        The fluid circulation loop as recited  
20       claimed in claim 24, comprising means a fluid additive arrangement for adding  
fluid to the loop by a Y-connector, ~~or a valve that adds fluid to a venous~~  
~~reservoir when open.~~

          Claim 26 has been amended as follows:

26.    (Currently amended)        The fluid circulation loop as recited  
25       claimed in claim 25, comprising a pump, a heater and an oxygenator in said  
loop.

27.    (New) The fluid circulation loop as claimed in claim 24  
comprising a valve adapted to add fluid to a venous reservoir when opened.

28.    (New) The method as claimed in claim 13, further comprising:  
catheterizing the patient using Seldinger technique

29.    (New) The method as claimed in claim 28 comprising using said  
30       Seldinger technique for positioning reinforced catheters in blood vessels  
passing through tissue compressed from the outside of the patients body.

30. (New) The method as claimed in claim 29, further comprising adding a therapeutic fluid to a fluid in said extracorporeal circulation, said fluid being blood or a therapeutic fluid or a mixture thereof.

31. (New) The method as claimed in claim 30, further comprising  
5 oxygenating the fluid.

32. (New) The method as claimed in claim 31, further comprising warming the fluid.

33. (New) The method as claimed in claim 18, where said thrombolytic agent is effective or present in such high concentration that it  
10 could cause hemorrhage or other side effect injuries if said liquid entered the blood circulation of the brain or other sensitive organ.